IN THE CLAIMS:

1   1-8 (CANCELLED)

1   9. (CURRENTLY AMENDED) An apparatus for improving utilization of a data link
2   coupled to a network comprising:
3   a packet buffer containing one or more queues configured to hold data, the one or
4   more queues associated with an excess rate component;
5   a queue manager coupled to the queues and configured to dequeue the data from
6   the queues and transfer the data onto the data link;
7   auxiliary queue logic coupled to the queue manager and configured to generate
8   scores for one or more of the queues, the scores to represent ratings of eligibility to trans-
9   fer data in accordance with the excess rate component, the auxiliary queue logic further
10   configured to maintain a scorecard of the generated scores and notify the queue manager
11   of a queue associated with the highest score in the scorecard to cause the queue manager
12   to dequeue data from the queue when the link becomes idle.

1   10. (PREVIOUSLY PRESENTED) The apparatus as defined in claim 9 comprising:
2   calendar queue logic coupled to the auxiliary queue logic and configured
3   to notify the auxiliary queue logic when the data link becomes idle.

1   11. (PREVIOUSLY PRESENTED) The apparatus as defined in claim 9 comprising:
2   a scheduler coupled to the auxiliary queue logic and configured to maintain at-
3   tribute information associated with the queues.

1   12. (PREVIOUSLY PRESENTED) The apparatus as defined in claim 11 wherein the
2   auxiliary queue logic is configured to acquire the attribute information associated with

2

3   the queues from the scheduler and use the attribute information to generate scores for the

4   queues.

1   13. (PREVIOUSLY PRESENTED) The apparatus as defined in claim 12 wherein the at-

2   tribute information includes rate information associated with the queues.

1   14. (PREVIOUSLY PRESENTED) The apparatus as defined in claim 13 wherein the rate

2   information includes the excess rate component.

1   15. (PREVIOUSLY PRESENTED) The apparatus as defined in claim 11 wherein the

2   scorecard is a data structure comprising one or more entries, and wherein each entry con-

3   tains a score field configured to hold a generated score and a queue identifier (QID) field

4   configured to hold a QID associated with a queue.

1   16. (PREVIOUSLY PRESENTED) The apparatus as defined in claim 15 wherein the

2   auxiliary queue logic is configured to acquire attribute information and a QID associated

3   with a queue, generate a score associated with the queue using the attribute information,

4   and place the score and QID in the score and QID fields, respectively, of an entry con-

5   tained in the scorecard.

1   17-20. (CANCELLED)

1   21. (CURRENTLY AMENDED) A method for improving utilization of a data link cou-

2   pled to a network comprising:

3   holding data in one or more queues <u>contained in a packet buffer</u> coupled to a

4   queue manager, the one or more queues associated with an excess rate component;

5   generating scores for the one or more of the queues, the scores to represent ratings

6   of eligibility to transfer data in accordance with the excess rate component;

7   maintaining a scorecard of the generated scores;

8   determining that a data link is idle; and

9   dequeuing, by the queue manager, data from a queue associated with a highest

10   score in the scorecard, and transferring the data onto the data link, in response to deter-

11   mining that the data link has become idle.

1   22. (PREVIOUSLY PRESENTED) The method as defined in claim 21 further compris-

2   ing:

3   acquiring attribute information associated with the one or more queues; and

4   using the attribute information to generate the scores for the one or more queues.

1   23. (PREVIOUSLY PRESENTED) The method as defined in claim 22 wherein the at-

2   tribute information includes rate information associated with the queues.

1   24. (PREVIOUSLY PRESENTED) The method as defined in claim 23 wherein the rate

2   information includes the excess rate component.

1   25. (PREVIOUSLY PRESENTED) The method as defined in claim 21 as defined in

2   claim 11 wherein the scorecard is a data structure comprising one or more entries, and

3   wherein each entry contains a score field configured to hold a generated score and a

4   queue identifier (QID) field configured to hold a QID associated with a queue.

1   26. (PREVIOUSLY PRESENTED) The method as defined in claim 25 further compris-

2   ing:

3   acquiring attribute information and a QID associated with a queue;

4   generating a score associated with the queue using the attribute information; and

5   placing the score and QID in the score and QID fields, respectively, of an entry

6   contained in the scorecard.

1   27. (PREVIOUSLY PRESENTED) The method as defined in claim 21 further compris-

2   ing:

3   determining the scorecard is full;

4   in response to the scorecard being full, determining if a generated score is greater

5   than a score contained in the scorecard; and

6   if so, replacing a lowest score in the scorecard with the generated score.

1   28. (PREVIOUSLY PRESENTED) The method as defined in claim 21 further compris-

2   ing:

3   determining the scorecard is not full; and

4   in response to the scorecard being not full, adding a generated score to the score-

5   card.

1   29. (CURRENTLY AMENDED) An apparatus for improving utilization of a data link

2   coupled to a network comprising:

3   <u>a packet buffer containing</u> one or more queues configured to hold data, the one or

4   more queues associated with an excess rate component;

5   means for generating scores for the one or more of the queues, the scores to repre-

6   sent ratings of eligibility to transfer data in accordance with the excess rate component;

7   means for maintaining a scorecard of the generated scores;

8   means for determining that a data link is idle; and

9   means for dequeuing data from a queue associated with a highest score in the

10   scorecard, and transferring the data onto the data link, in response to determining that the

11   data link has become idle.

1   30. (PREVIOUSLY PRESENTED) The apparatus as defined in claim 29 further com-

2   prising:

3   means for acquiring attribute information associated with the one or more queues;

4   and

5   means for using the attribute information to generate the scores for the one or

6   more queues.

1   31. (PREVIOUSLY PRESENTED) The apparatus as defined in claim 30 wherein the at-

2   tribute information includes the excess rate component.

1   32. (PREVIOUSLY PRESENTED) The apparatus as defined in claim 29 further com-

2   prising:

3   means for determining if a generated score is greater than a score contained in the

4   scorecard; and

5   means for replacing a lowest score in the scorecard with the generated score if the

6   generated score is greater than a score contained in the scorecard.